REMARKS

I. Status and Disposition of the Claims

Claims 48-94 are pending. No claims are amended or cancelled herein.

II. Response to Claim Rejections

A. § 102(b) rejection of claims 48, 50-60, 67, 68, 79, 80, 88, 91, and 94

Claims 48, 50-60, 67, 68, 79, 80, 88, 91 and 94 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Japanese Patent Publication No. JP 2000-086824 ("Sumiyoshi") in view of Exxon Mobil Chemical ("the Exxon reference") for the reasons set forth on pages 2 and 3 of the Office Action. Applicants respectfully disagree with and traverse this rejection for at least the following reasons.

To establish a rejection under 35 U.S.C § 102, the Examiner must demonstrate that the reference teaches each and every claim limitation. *See* M.P.E.P § 2141. A claim is anticipated under § 102 only if each and every element, as set forth in the claim, is found in a single prior art reference. M.P.E.P. § 2131. For at least the following reasons, the Examiner has failed to meet this burden.

Each of present independent claims 48, 88 and 94 recite, *inter alia*, an "elastomeric composition compris[ing]: (a) at least one diene elastomeric polymer; (b) at least one paraffin wax; and (c) at least one polymer of at least one C_3-C_{24} α-olefin. . . ." *See* present claims 48, 88, and 94. As discussed below, Sumiyoshi fails to teach or suggest the claimed elastomeric composition.

Sumiyoshi discloses a "rubber constituent mainly used for the tire for automobiles." Sumiyoshi, paragraph [0001].[1] This rubber constituent includes a rubber component, a modified paraffin wax, and an olefin system resin component. *Id.* at Abstract, [0009]. As indicated by the Examiner, the Sumiyoshi's olefin system resin component can be Escorez 1102 ®. *Id.* at [0009]. The Examiner appears to consider the olefin resin system of Sumiyoshi to correspond to component (c) recited in claims 48, 88 and 94. Applicants respectfully disagree.

Contrary to the Examiner's apparent assertion in the Office Action, the present claims do not merely recite a polymer of an "olefin resin." *See* Office Action, page 2 (noting Sumiyoshi's disclosure of an olefin resin). Rather, the claimed elastomeric composition includes at least one polymer of at least one C_3-C_{24} **alpha** olefin. *See* claims 48, 88, and 94 (emphasis added). As exemplified by the attached dictionary definition, the term "olefin" refers to a "class of unsaturated aliphatic hydrocarbons having one or more double bonds[.] *See* definition of olefin, HAWLEY'S CONDENSED CHEMICAL DICTIONARY, page 819 (1997) (Courtesy copy attached). As further explained in the attached definition, alpha olefins are a subset of the class of olefins, and are defined as olefins wherein the double bond is located on the first carbon atom. *See Id.* Thus, a person or ordinary skill in the art would readily recognize that a mere disclosure of a polymer of olefin monomers does not necessarily correlate to a polymer of at least one **alpha** olefin.

[1] All references to Sumioyoshi refer to the machine translation provided by the Examiner with the Office Action.

Although Sumiyoshi discloses the use of olefin resin systems, *e.g.*, Escorez 1102® (hereafter, "the Escorez polymer), it is silent with respect to whether such systems are derived from at least one C_3-C_{24} **alpha** olefin, as claimed. Sumiyoshi at [0009]. The Exxon reference provides information regarding the nature and properties of the Escorez polymer. However, the Exxon reference does not indicate that the Escorez polymer comprises at least one polymer of at least one C_3-C_{24} α-olefin, as claimed. Rather, the Exxon reference merely discloses that the Escorez polymer is formed from C_5-C_6 olefin and diolefin monomers. *See* the Exxon reference, page 13. Accordingly, a person skilled in the art would recognize this to mean that the olefins may have more than one bond and have four to five possible locations for those bonds. As discussed above, however, mere disclosure of an olefin polymer does not necessarily correlate to the disclosure of a polymer comprising at least one alpha olefin.

For at least the foregoing reasons, it is clear that Sumiyoshi and the Exxon reference fail to expressly disclose at least component (c) of claims 48, 88, and 94.

Insofar as the Examiner may be asserting that the Escorez polymer *inherently* contains at least one C_3-C_{24} alpha olefin, Applicants respectfully submit that the Examiner has not met the burden necessary to establish a viable theory of inherency. In this regard, Applicants respectfully direct the Examiner to M.P.E.P § 2112 (IV), which states, *inter alia*:

> The fact that a certain result or characteristic **may** occur or be present in the prior art is **not** sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)... "To establish inherency, [the] **extrinsic evidence 'must** make clear that the missing descriptive matter is **necessarily** present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. **Inherency, however, may not be established by probabilities or possibilities.** The mere fact that a certain thing **may**

> result from a given set of circumstances is **not** sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)... In relying upon the theory of inherency, the examiner ***must*** **provide** a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

(emphasis added).

In the present case, however, the Examiner has not provided *any* evidence or technical arguments that reasonably support an assertion that the olefin resin component of Sumiyoshi *necessarily* comprises at least one polymer of at least one C_3-C_{24} α-olefin, as claimed. This is particularly evident given that, as mentioned above, the term "olefins" refers to a broad class of unsaturated aliphatic hydrocarbons that, while inclusive of alpha olefins, is not limited to alpha olefins. As also stated above, while Sumioyoshi and the Exxon reference disclose the broad class of olefins, they do not teach or suggest the subclass of alpha olefins. Applicants emphasize that the fact that alpha olefins are a subset of olefins does not, in and of itself, amount to a "reasonable basis" necessary to establish a viable theory of inherency.

Finally, Applicants believe the decision, *Akzo N.V. v. International Trade Comm'n*, 1 U.S.P.Q.2d 1241 (Fed. Cir. 1986) is controlling in view of the broad disclosure of C5 and C6 "olefins" and the fact that alpha olefins are a distinct and separate subclass. In *Akzo*, Akzo N.V. appealed the Administrative Law Judge's determination that the prior art did not anticipate or render obvious the claims. *Id.* at 1242. While the claim recited, *inter alia*, "sulfuric acid of at least 98% concentration," the prior art taught all of the limitations of the claim except it merely called for the use of "sulfuric acid." *Id.* at 1245. The Federal Circuit affirmed the Administrative Law Judge's determination that "sulfuric acid" is a not an inherent disclosure of "sulfuric acid

of at least 98% concentration" to a person with a doctorate or post doctorate in chemistry and that the claims are neither anticipated not obvious in view of that disclosure. *Id.*

For at least the foregoing reasons, Sumiyoshi does not teach, either expressly or inherently, each and every element of claims 48, 50-60, 67, 68, 79, 80, 81, 91, and 94. Thus, the § 102(b) rejection of these claims as anticipated by Sumiyoshi is improper, and should be withdrawn.

B. § 103(a) rejection of claims 49, 61-66, 69-80, 83-87, 90, 92, and 93

Claims 49, 61-66, 69-80, 83-87, 90, 92, and 93 as rejected as allegedly unpatentable over Sumiyoshi and the Exxon reference for the reasons set forth on pages 3 through 5 of the Office Action. Applicants respectfully disagree with and traverse this rejection for at least the following reasons.

To establish a rejection under 35 U.S.C. § 103(a), the Examiner must establish three basic criteria. *See* M.P.E.P. § 2143. Specifically, the Examiner must establish: (1) that the prior art teaches or suggests all of the elements of a claim; (2) that there is some teaching or suggestion in the prior art to make the modification; and (3) that one of ordinary skill in the art would have had a reasonable expectation of success in making the asserted modification. *Id.* In the present case, the Examiner has not met any of the above criteria.

For the reasons set forth above in section II(A), the Examiner has not established that Sumiyoshi and the Exxon reference, alone or in combination, teach or suggest each and every element of claims 49, 61-66, 69-80, 83-87, 90, 92, and 93. In particular,

the Examiner has not shown that these references disclose a elastomeric material comprising the claimed at least one polymer comprising at least on C_3-C_{24} α-olefin. *See, Akzo*, 1 U.S.P.Q.2d at 1245 (holding that claims to a process for making fibers using a 98% solution of sulfuric acid were not obvious in view of a reference that disclosed using a sulfuric acid solution but did not disclose using a 98% solution of sulfuric acid).

Moreover, the Examiner has not shown that Sumiyoshi and the Exxon reference provide some teaching or suggestion that would have motivated one of ordinary skill in the art to modify the composition of Sumiyoshi so as to utilize a polymer derived from the claimed alpha olefin, with a reasonable expectation of success. Indeed, these references are completely silent with respect to the use of alpha olefins.

Finally, Applicants note that for the first time in many years, the Supreme Court, in a unanimous opinion, addressed the issue of obviousness. *KSR Internat'l Co. v. Teleflex Inc.*, 82 U.S.P.Q. 2d 1385 (U.S. 2007). In *KSR*, the Court mandated a more flexible test than the established teaching, suggestion, and motivation test for obviousness, including the application of common sense and consideration of marketplace demands. *Id.* at 1395. Of note is the Court's indication that "[o]ften, it will be necessary... to look at the interrelated teachings of multiple patents; the effects of demands to the known design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed." *Id.* at 1396.

Applicants respectfully submit that *KSR* is clearly distinguishable from the present case, insofar as in *KSR*, the prior art at issue disclosed each element of the claimed invention, albeit not in the claimed combination. *See Id.* at 1393. In the present case, however, the prior art fails to disclose each element of the claimed invention, together or separately. Specifically, each of the applied references fail to disclose the claimed at least one polymer comprising at least one C_3-C_{24} α-olefin. Thus, inasmuch as the supporting rationale of *KSR* is applicable to all determinations of obviousness, it reflects on a clearly different scenario from that present in the present application.

For at least the foregoing reasons, Applicants submit that the Examiner has failed to establish that Sumiyoshi and the Exxon reference teach or suggest each and every element of clams 49, 61-66,69-80, 83-87, 90, 92, and 93. Further, there is no teaching or suggestion in Sumiyoshi or the Exxon reference that would have motivated one of ordinary skill in the art to modify Sumiyoshi so as to arrive at the claimed invention. Therefore the § 103(a) rejection of claims 49, 61-66,69-80, 83-87, 90, 92, and 93 is improper, and should be withdrawn.

C. § 103(a) rejection of claims 81, 82, and 89

The Examiner rejected claims 81, 82, and 89 as allegedly unpatentable over Sumiyoshi in view of the Exxon reference, and further in view of U.S. Patent No. 4,207,218 ("Jorgenson") for the reasons set forth at pages 5 and 6 of the Office Action. Applicants respectfully disagree with and traverse this rejection for at least the following reasons.

Inasmuch as Jorgenson has anything to do with the present claims, it fails to remedy the deficiencies of Sumiyoshi and the Exxon reference. Indeed Jorgenson, like Sumiyoshi and the Exxon reference, is completely silent with respect to a elastomeric polymer composition comprising, *inter alia*, at least one polymer of at least on C_3-C_{24} α-olefin, as claimed.

Therefore Jorgenson, alone or in combination with Sumioyishi and the Exxon reference, fails to teach or suggest each and every element of the claims. Moreover, nothing in these three references provides any teaching or suggestion that would have motivated one of ordinary skill in the art to modify Sumiyoshi so as to arrive at the claimed invention. Finally, with respect to the *KSR* decision, Applicants again note that unlike the prior art at issue in *KSR*, Jorgenson, Sumiyoshi, and the Exxon reference do not disclose, individually or in combination, each and every element of the claims. Further, there is no evidence of record establishing that the design community, elements in the marketplace, or in the background knowledge possessed by one having ordinary skill that provides some apparent reason to combine Sumiyoshi with another reference so as to arrive at the claimed invention.

Therefore the § 103(a) rejection of claims 81, 82, and 89 as being unpatentable over Sumiyoshi, the Exxon reference, and Jorgenson is improper, and should be withdrawn.

III. Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 13, 2007

By: _____
Anthony A. Hartmann
Reg. No. 43,662

Attachment: Hawley's Condensed Chemical Dictionary, page 819 (1997)

Hawley's

Condensed Chemical

Dictionary

THIRTEENTH EDITION

Revised by

Richard J. Lewis, Sr.

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oil gas. A gas made by the reaction of steam at high temperature on gas oil or similar fractions of petroleum, or by high-temperature cracking of gas oil. One typical analysis is heating value 554 Btu/ft³, illuminants 4.2%, carbon monoxide 10.4%, hydrogen 47.6%, methane 27.0%, carbon dioxide 4.6%, oxygen 0.4%, nitrogen 5.8%, autoign temp 637F (336C).
Hazard: Flammable, dangerous fire and explosion risk. Toxic by inhalation.

oiliness. That property of a lubricant that causes a difference in coefficient of friction when all the known factors except the lubricant itself are the same. This concept is also expressed by the term *lubricity*.

oil of bitter almond. See almond oil.

oil of mirbane. See nitrobenzene.

oil of vitriol. See sulfuric acid.

oil of wintergreen. See methyl salicylate.

oil sands. (tar sands). Porous sandstone structures occurring on the surface and to depths of 100 m or more in certain localities; they contain a high proportion of bitumen composed chiefly of asphaltenes and maltha, together with substantial percentage of sulfur and heavy metals. Its viscosity is about midway between that of crude oil and soft asphalt. The largest deposit in North America is in the Athabasca region of Alberta; there are smaller ones in the western U.S. Venezuela and Trinidad have large deposits. The Athabasca sands have been successfully mined and have made a substantial contribution to Canadian energy resources over the past decade.

oil shale. Extensive sedimentary rock deposits in the mountains of Colorado, Utah, and Wyoming contain a high percentage of kerogen, which can be separated from the shale either by heating in retorts (surface mining) or by direct combustion in situ in interior excavations. The deposits range in thickness from 10 to 800 ft and yield from 25 to 30 gal oil/ton shale. Only 33% of the oil content is recoverable by present techniques.
See shale oil; kerogen.

oil varnish. See varnish.

oil, vulcanized. See factice.

oil white. One of several mixtures of lithopone and white lead or zinc white. It may also contain gypsum, magnesia, whiting, or silica.
Use: White-lead substitute.

ointment. (salve). A semisolid pharmaceutical preparation based on a fatty material such as lanolin and often containing petrolatum or zinc oxide together with specific medication for relief of rashes and other forms of dermatitis.

oiticica oil.
Derivation: By expression from the seeds of the Brazilian oiticica tree, *Licania rigida*.
Chief constituents: Glycerides of α-licanic acid (4-keto-9,11,13-octadecatrienoic acid).
Use: Drying oil in paints, varnishes, etc.

"Okerin" ***[Astor].*** TM for rubber waxes and paraffin products.
Available forms: Flake, prill, or slab.
Use: To provide controlled migration for ozone protection of rubber.

-ol. A suffix indicating that one or more hydroxyl groups (OH) are present in an organic compound, e.g., alcohol, phenol, menthol. Thiol is an exception, the oxygen of the OH group being replaced by sulfur. There are a few other exceptions among the essential oils, e.g., eucalyptol.

Olah, George A. (1927–). Born in Hungary, now an American citizen, he won the Nobel prize for chemistry in 1994 for his work with carbocations. These are positively charged hydrocarbons with lifetimes on the order of microseconds. Olah developed methods of studying carbocations with different physical techniques, changing the direction of this field. He received a Ph.D. from the Technical University of Budapest in 1949.

oleamide. *cis*-$CH_3(CH_2)_7CH{:}CH(CH_2)_7CONH_2$.
Properties: Ivory-colored powder. Mp 72C, d 0.94. Combustible.
Grade: Refined.
Use: Slip agent for extrusion of polyethylene, wax additive, ink additive.

oleate. Salt made up of a metal or alkaloid with oleic acid. It is used for external medications and in soaps and paints.

olefin. (alkene). A class of unsaturated aliphatic hydrocarbons having one or more double bonds, obtained by cracking naphtha or other petroleum fractions at high temperatures (1500–1700F). Those containing one double bond are called alkenes, and those with two are called alkadienes, or diolefins. They are named after the corresponding paraffins by adding *-ene* or *-ylene* to the stem. α-olefins are particularly reactive because the double bond is on the first carbon. Examples are 1-octene and 1-octadecene, which are used as the starting point for medium-biodegradable surfactants. Other olefins (ethylene, propylene, etc.) are starting points for certain manufactured fibers.
See diolefin.

olefin fiber. Synthetic long-chain polymer fiber composed of at least 85% by weight of ethylene, propylene, or other crystalline polyolefins.